

What is claimed is:

1. A method for splicing a second compressed video transport stream into a first compressed video transport stream, comprising:
  - locating an intracoded frame (I-frame) of the second transport stream at the beginning of a splicing operation;
  - storing the I-frame once located together with subsequent frames of the second transport stream into a temporary storage buffer;
  - searching said first transport stream for a suitable insertion point therein; and
  - adjusting a time base of at least one of the first and second transport streams to force continuity between the transport streams at said insertion point and thereafter.
2. A method in accordance with claim 1, wherein:
  - said adjusting step adjusts a program clock reference (PCR) of said second transport stream to match a PCR of said first transport stream.
3. A method in accordance with claim 2, wherein the adjusted PCR of said second transport stream is tracked for use in decoding information carried by the second transport stream.
4. A method in accordance with claim 2, wherein the PCR of said first transport stream is tracked for use in decoding information carried by the second transport stream.
5. A method in accordance with claim 2, wherein said adjusting step adds an offset to the PCR of said second transport stream, said offset being representative of a difference in time between the PCRs of the first and second transport streams.

6. A method in accordance with claim 1, wherein:  
successive video frames are provided in said first and second transport streams;  
said frames have decode time stamps (DTS) which reference a time base of the respective transport stream; and  
in the event that said adjusting step adjusts the time base of the second transport stream, the decode time stamps of the second transport stream frames are correspondingly adjusted.
7. A method in accordance with claim 6, wherein video from said first and second streams is frame synchronized, and:  
said adjusting step adjusts a program clock reference (PCR) of said second transport stream to match a PCR of said first transport stream; and  
the decode time stamps of the second transport stream frames are adjusted in accordance with the adjustment of the second transport stream PCR.
8. A method in accordance with claim 7, wherein the adjusted PCR of said second transport stream is tracked for use in decoding frames of the second transport stream.
9. A method in accordance with claim 7, wherein the PCR of said first transport stream is tracked for use in decoding frames of the second transport stream.
10. A method in accordance with claim 6, wherein an offset is added to the decode time stamps of said second transport stream, said offset being representative of a difference in time between (i) the DTS of a last frame of the first transport stream before said insertion point, and (ii) the DTS of said I-frame of the second transport stream.

11. A method in accordance with claim 10, wherein:  
at least some of the first and second transport stream frames have presentation time stamps (PTS) which reference the time base of the respective transport stream; and  
an offset is added to the presentation time stamps of the second transport stream, said offset being representative of a difference in time between (i) the last PTS of the first transport stream that occurs before said insertion point, and (ii) the first PTS of the second transport stream that occurs at or after said insertion point.

12. A method in accordance with claim 1, wherein:  
successive video frames are provided in said first and second transport streams;  
at least some of said frames have presentation time stamps (PTS) which reference a time base of the respective transport stream; and  
an offset is added to the presentation time stamps of the second transport stream, said offset being representative of a difference in time between (i) the last PTS of the first transport stream that occurs before said insertion point, and (ii) the first PTS of the second transport stream that occurs at or after said insertion point.

13. A method in accordance with claim 12, wherein:  
said adjusting step adjusts a program clock reference (PCR) of said second transport stream to match a PCR of said first transport stream; and  
the presentation time stamps of the second transport stream frames are adjusted in accordance with the adjustment of the second transport stream PCR.

14. A method in accordance with claim 13, wherein the adjusted PCR of said second transport stream is tracked for use in decoding frames of the second transport stream.

15. A method in accordance with claim 13, wherein the PCR of said first transport stream is tracked for use in decoding frames of the second transport stream.

16. A method in accordance with claim 1, wherein:  
said insertion point follows a Group of Pictures (GOP) or a sub-GOP in said first transport stream; and

a most recent anchor frame of the first transport stream at the end of said GOP or sub-GOP is repeated until the insertion point occurs.

17. A method in accordance with claim 16, wherein:  
said anchor frame includes a plurality of display fields; and  
the number of said display fields is adjusted, so that the last field displayed by the anchor frame prior to said splice complements a polarity of a first display field of said I-frame of said second transport stream.

18. A method in accordance with claim 1, further comprising:  
providing the spliced transport stream to a transcoder which maintains a desired output bit rate for the spliced stream.

19. A method in accordance with claim 18, wherein said transcoder further provides protection from an underflow or overflow of a video buffer verifier.

20. Apparatus for splicing a second compressed video transport stream into a first compressed video transport stream, comprising:

a de-multiplexer adapted to locate an intracoded frame (I-frame) of the second transport stream at the beginning of a splicing operation;

memory adapted to store the I-frame once located together with subsequent frames of the second transport stream; and

means for searching said first transport stream for a suitable insertion point therein;

wherein a time base of at least one of the first and second transport streams is adjusted to force continuity between the transport streams at said insertion point and thereafter.

21. Apparatus in accordance with claim 20, further comprising:  
means for adjusting a program clock reference (PCR) of said second transport stream to match a PCR of said first transport stream in order to force said continuity.

22. Apparatus in accordance with claim 21, further comprising:  
means for adjusting, in accordance with the adjustment of the second transport stream PCR, decode time stamps of video frames carried by the second transport stream.

23. Apparatus in accordance with claim 20, wherein:  
successive video frames are provided in said first and second transport streams;  
at least some of said frames have presentation time stamps (PTS) which reference a time base of the respective transport stream; and  
means are provided for adding an offset to the presentation time stamps of the second transport stream, said offset being representative of a difference in time between (i) the last PTS of the first transport stream that occurs before said insertion point, and (ii) the first PTS of the second transport stream that occurs at or after said insertion point.

24. Apparatus in accordance with claim 20, wherein:  
said insertion point follows a Group of Pictures (GOP) or a sub-GOP in said first transport stream; and  
means are provided for repeating a most recent anchor frame of the first transport stream at the end of said GOP or sub-GOP until the insertion point occurs.

25. Apparatus in accordance with claim 24, wherein:  
said anchor frame includes a plurality of display fields; and

means are provided for adjusting the number of said display fields, so that the last field displayed by the anchor frame prior to said splice complements a polarity of a first display field of said I-frame of said second transport stream.

26. Apparatus in accordance with claim 20, further comprising:  
a transcoder for receiving the transport streams and maintaining a desired output bit rate after splicing.

27. Apparatus in accordance with claim 26, wherein said transcoder further provides protection from an underflow or overflow of a video buffer verifier.